

REMARKS

The Official Action mailed February 19, 2004, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to June 19, 2004. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on January 24, 2002, and March 19, 2002.

Claims 1-36 are pending in the present application, of which claims 1-3, 23 and 28-30 are independent. Claims 2, 3, 29 and 30 have been amended to correct minor matters of form. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action objects to claims 2, 3, 29 and 30, line 6, asserting that "a" should be inserted before "subsequent." In response, claims 2, 3, 29 and 30 have been amended to recite "a subsequent doping step." Accordingly, reconsideration and withdrawal of the objections are in order and respectfully requested.

The Official Action rejects claims 1-36 as obvious based on the combination of U.S. Patent Application Publication No. 2002/0098635 to Zhang et al. and U.S. Patent No. 5,966,596 to Ohtani et al. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Zhang and Ohtani or to combine reference teachings to achieve the claimed invention.

The Official Action concedes that Zhang does not teach a method of forming a chemical oxide film and that Zhang does not disclose a particular method for forming oxide layer 33 (page 3, Paper No. 22040211). The Official Action states that "the particular method used to form the oxide layer lacks criticality" in Zhang (Id.). The Official Action asserts that "one of ordinary skill in the art at the time the invention was made would have recognized that any known method could be used to form the oxide layer, 33, in the absence of a particular suggestion by Zhang et al." (pages 3-4, Id.). The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

The fact that there is no method for forming the oxide layer 33 disclosed in Zhang does not mean that any known method could be used to form the oxide layer by one of ordinary skill in the art at the time the invention was made. The above-referenced assertions by the Examiner appear to lack any known legal precedent in the MPEP, CFR and court decisions. Therefore, the Applicant respectfully submits that the above assertions are baseless and should be reconsidered and withdrawn. As discussed in greater detail below, the Examiner appears to have reversed the burden in forming a *prima facie* case of obviousness.

The Official Action relies on Ohtani to allegedly teach “a method of forming a chemical oxide film” (page 4, Id.). The Official Action asserts that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the oxide layer of Zhang et al. by the method of Ohtani et al., since the method of forming an oxide layer lacks criticality in the invention of Zhang et al., and since the method of Ohtani is a known method of forming an oxide that improves the surface characteristics of the underlying film” (Id.). The Applicant respectfully disagrees and traverses the above assertions.

The burden of showing sufficient motivation to combine references lies with the Office. MPEP § 2142 states “The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. ... The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention.”

It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be used together, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the present invention. MPEP § 2142 further states: “The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. ‘To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.’ *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).”

Ohtani appears to disclose a silicon oxide film to improve the surface characteristics of the amorphous silicon and Ohtani does not disclose a silicon oxide film used as a protective film. The Official Action has not shown why one would have been motivated to remove Zhang's method of providing a protective film, and substitute instead Ohtani's method of improving surface characteristics. Indeed, such an alleged modification would appear to destroy the Zhang device. Therefore, there is no motivation for combining Zhang's silicon oxide protective film and Ohtani's method of forming a silicon oxide film for improving surface characteristics.

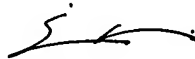
Even assuming motivation could be found, the Official Action has not given any indication that one with ordinary skill in the art at the time of the invention would have had a reasonable expectation of success when combining Zhang and Ohtani. As noted above, Ohtani appears to teach a thin oxide film to improve the surface characteristics of amorphous silicon. There is no discussion in the Official Action as to why one of skill in the art would have expected that the use of such thin oxide film would be successful after one has removed the protective oxide film 33 in Zhang.

In the present application, it is respectfully submitted that the prior art of record, alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,



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